

LISTING OF THE CLAIMS

The following listing of claims replaces all prior claim listings and versions:

1. (Currently Amended) A machine for processing a sheet for ~~the~~ production of packagings, the machine comprising:

a machine entrance, a machine exit and a processing zone positioned between the machine entrance and the machine exit, the processing zone including a sheet path;

a sheet drive operable to drive sheets in a drive direction and at a substantially constant drive speed through the processing zone;

a processing apparatus comprising a first tooling supported by a first rotary support shaft and a counter-tooling supported by a second rotary support shaft, the first rotary support shaft and the second rotary support shaft extending transversely to the drive direction and ~~disposed~~ positioned opposite each other and respectively on one and the opposite side of the sheet path, the processing apparatus being operable to produce at least one of ~~cutouts~~ a cutout and ~~folds~~ a fold disposed in the sheets transverse to the drive direction;

an operating apparatus for rotationally driving the first rotary support shaft and the second rotary support shaft so that at least at a moment when the first tooling and the counter-tooling cooperate with the sheet to make the at least one of the cutout ~~[[or]]~~ and the fold, the first tooling is rotating at a processing speed having a tangential component equal to the drive speed, and the counter-tooling is situated opposite the first tooling;

the counter-tooling having a substantially cylindrical surface ~~with~~ comprising at least one working strip positioned thereon, the at least one working strip extending in length parallel to a rotation axis of the second rotary support shaft and ~~[[is]]~~ being radially offset relative to portions of the cylindrical surface adjacent to the at least one working strip, the at least one working strip being shaped and positioned to cooperate with the first tooling to form the at least one of the cutout and ~~the~~ fold;

the at least one working strip having a width in a circumferential direction greater than a width of the first tooling;

the at least one working strip ~~being made with~~ comprising a flexible material to allow the first tooling to cooperate with said at least one working strip; and

a first motor drive operable to drive the first rotary support shaft and a second motor drive operable to drive the second rotary support shaft such that the second motor drive is operated as a slave to the first motor drive.

2. (Currently Amended) The machine as claimed in claim 1, further comprising a plurality of ~~the~~ working strips spaced angularly apart on the surface of the counter-tooling and projecting from the cylindrical surface of the counter-tooling.

3. (Currently Amended) The machine as claimed in claim 2, further comprising withdrawn strips positioned on the surface of the counter-tooling in a regular alternation along the circumferential direction with ~~[[of]]~~ the plurality of working strips which ~~are projecting strips project~~ from the cylindrical surface ~~and withdrawn strips on the surface of the counter-tooling.~~

4. (Currently Amended) The machine as claimed in claim 1, wherein each working strip of the plurality of working strips has a width in the circumferential direction greater than the width of the first tooling.

5. (Currently Amended) The machine as claimed in claim 4, wherein the width of each working strip of the plurality of working strips lies within ~~the~~ a range of 1.05 to 1.8 times the width of the first tooling.

6. (Previously Presented) The machine as claimed in claim 1, wherein the at least one working strip is mounted detachably on the counter-tooling.

7. (Withdrawn) The machine as claimed in claim 6, further comprising a support plate supporting the surface of the counter-tooling; at least two surface elements on the support plate and having mutually opposite axial direction edges provided with respective first holding surfaces defining a receptacle for each of the working strips between the holding surfaces, the working strip is capable of being inserted in the receptacle, the working strip having axial direction edges, and second holding surfaces on the edges of the working strip and capable of cooperating with the first holding surfaces.

8. (Withdrawn) The machine as claimed in claim 7, wherein the surface elements are fixed detachably on the support plate.

9. (Previously Presented) The machine as claimed in claim 1, further comprising:
a detector operable for determining information relating to a position of the sheet in the processing zone;

a control unit operable, as a function of the determined information relating to the position of the sheet in the processing zone, to control the first motor drive of the first rotary support shaft and the second motor drive of the second rotary support shaft so that, during processing of the sheet, the first tooling is in contact with a predefined region of the sheet and the first tooling is propelled with a processing speed having a tangential component equal to the drive speed of the sheet, while the working strip is positioned and operable such that the working strip is in contact with the defined region of the sheet, on the other side of the sheet relative to the first tooling.

10. (Previously Presented) The machine as claimed in claim 9, wherein the control unit operates the first motor drive and the second motor drive so that, at least when the first tooling and the at least one working strip cooperate with the sheet for the processing of the sheet, the first tooling and the at least one working strip are each propelled at the processing speed.

11. (Previously Presented) The machine as claimed in claim 9, wherein the first rotary support shaft is a multi-tooled support shaft supporting at least a first tool and a second tool which are spaced angularly apart around the first rotary support shaft;

the control unit operates the first motor drive of the multi-tooled support shaft according to a cycle comprising a processing phase in which the first tool is in contact with a defined first region of the sheet then situated in the processing zone of the machine and the first tool is propelled with the processing speed, followed by a positioning phase in which the multi-tooled support shaft is driven to place the second tool in a position to process a defined second region of the sheet, and followed by a processing phase in which the second tool is in contact with the second region and the second tool is propelled with the processing speed.

12. (Currently Amended) The machine as claimed in claim 11, comprising a second working strip, wherein the control unit operates the second motor drive of the second rotary support shaft so that, in the course of ~~[[a]]~~ the cycle, the first tool and the second tool of the first rotary support shaft cooperate with the at least one working strip and the second working strip.

13. (Currently Amended) The machine as claimed in claim 12, wherein the control unit operates ~~the a~~ rotational drive of the first rotary support shaft and the second rotary support ~~shafts~~ shaft, and is operable to control the rotational drive so that, during successive processing of a plurality of sheets, the tooling cooperates successively with a different ones working strip of the at least one working strips strip and the second working strip.

14. (Withdrawn) The machine as claimed in claim 4, wherein the width of each working strip is approximately the width of the first tooling.

15. (Currently Amended) A machine for processing a sheet for the production of packaging, the machine comprising:

- a machine entrance, a machine exit and a packaging processing zone positioned between the machine entrance and the machine exit and comprising a sheet path;

- a sheet drive operable to drive sheets in a drive direction at a substantially constant drive speed through the processing zone;

- a processing apparatus comprising a first tooling supported by a first rotary support shaft and a counter-tooling supported by a second rotary support shaft, the first rotary support shaft positioned opposite the second rotary support shaft on a second side of the sheet path from the second rotary support shaft, the first rotary support shaft and the second rotary support shaft extending transversely to the drive direction, the processing apparatus being operable to produce at least one of a cutout or a fold in the sheet transverse to the drive direction;

- an operating apparatus for rotationally driving the first rotary support shaft and the second rotary support shaft such that at least at a moment when the first tooling and the counter-tooling cooperate with the sheet to make the at least one of the cutout or the fold, the first tooling is rotating at a processing speed having a tangential component equal to the drive speed, and the counter-tooling is situated opposite the first tooling;

the counter-tooling having a substantially cylindrical surface comprising a working strip positioned thereon, the working strip extending in length parallel to a rotation axis of the second rotary support shaft and being radially offset relative to portions of the cylindrical surface adjacent to the working strip, the working strip being shaped and positioned to cooperate with the first tooling to form the at least one of the cutout or the fold and the working strip having a width in a circumferential direction greater than a width of the first tooling; and

a first motor drive operable to drive the first rotary support shaft[.]] and a second motor drive operable to drive the second rotary support shaft[.]] such that the second motor drive is operated as a slave to the first motor drive.

16. (Currently Amended) The machine of claim 15, comprising a second working strip projecting from the cylindrical surface positioned angularly apart on the surface of the counter-tooling from the working strip, each working strip having a width in the circumferential direction greater than [[a]] the width of the first tooling.

17. (Currently Amended) The machine as claimed in claim 16, wherein the width of each working strip lies within the a range of 1.05 to 1.8 times the width of the first tooling.

18. (Previously Presented) The machine as claimed in claim 16, wherein each working strip is mounted detachably on the counter-tooling.

19. (Previously Presented) The machine as claimed in claim 15, wherein the working strip is mounted detachably on the counter-tooling.